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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,260	11/14/2003	Masaru Murashita	29A 3499	3837

3713 7590 01/11/2007
KODA & ANDROLIA
2029 CENTURY PARK EAST
SUITE 1140
LOS ANGELES, CA 90067

EXAMINER

JAWORSKI, FRANCIS J

ART UNIT	PAPER NUMBER
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3768

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/714,260

Applicant(s)

MURASHITA, MASARU

Examiner

Jaworski Francis J.

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/19/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 – 8 and 10 -15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US5701897) in view of Hashimoto et al (US6245017) , further in view of Gerard et al (US7043062, newly of record) and Masahida et al (JP20023306483, of record with the IDS filed 6/19/06).

Sano as earlier discussed teaches variously the heart cycle time phase obtainance of displacement information data in the form of tissue velocity or acceleration of displacement echo data over two dimensions but also including a 3D embodiment as discussed in col. 43 and which includes radial straight-line determinations of these parameters using either a machine-determined center of gravity reference identifier within the ventricle or an operator-derived centerpoint reference, with absolute display colorizations of these parameters as set forth in cols. 11-12 . The former does not however teach three-dimensional rendering. However it would have been obvious in view of Hashimoto et al col. 11 lines 35-50 or col. 12 bottom to produce full 3D including volume rendering in realtime .

Re-stated in alternative language as previously , the Examiner is viewing Sano as teaching display of time phased referenced displacement parameter information (radial line center-of-gravity technique with relative/absolute determinations and colorization quantifications) with rudimentary 3D representation in wire frame as technology limited by real-time updating soas to provide full 3D volume assemblage and rendered view, however this full volume assemblage and view rendering was later realized by higher speed components and specialty techniques detailed in the latter such that the full 3D and rendering enhancements would have become obvious to artisans by the time of the Hashimoto et al/ teaching.

Whereas applicants had argued in the January 14, 2006 amendment response that Sano inter alia was Doppler motion-based and concerned with velocity as opposed to displacement measurement, Gerard et al evidences that the artisan would entertain referenced displacement of a non-doppler-derived origin as a basis for movement deformation imaging in the ultrasound three-dimensional cardiac kinetic study context, and Masahide et al further evidences that is would have been obvious to organize displacement information in accordance with time phases when performing kinetic studies.

[The claims are rejected en bloc under this argument albeit it is unclear from the translated portion of Masahide et al why 'hourly' data results are produced since the time frame for cardiac image based studies and therapeutic intervention if necessary is ordinarily much shorter.]

The IDS 6/19/06 citations were otherwise treated as follows:

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Mochizuki .et al (US5706816) is directed to ultrasound 3D brightness extraction for providing a form of transparency ultrasound image analogous to x-ray formats.

Remaining Japanese patent documents pertain to voxel extraction by binarization and to general establishment of displacement references and/or use of center of gravity reference with true velocity component extractions for cardiac kinetics and volume quantification studies.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

010707



Francis J. Jaworski
Primary Examiner